

DEPARTMENT ELECTRICAL AND ELECTRONICS ENGINEERING
INDUSTRIAL VISIT REPORT

DATE: 25.02.2025

Location: 230KV/110KV Gurubarapalli Sub - Station

Organized by: Er. Perumal Manimekalai Engineering College

Participants: III Year EEE 60 Students & 02 Faculty

Introduction

The Industrial visit to the 230KV/110KV Gurubarapalli Substation was organized by Department of Electrical and Electronics Engineering for III Year EEE students to provide practical exposure on 25.02.2025 functioning and operations of a high-voltage substation. The visit aimed to bridge the gap between theoretical knowledge and real-world applications.

Objectives

- To understand the layout and components of a 230KV/110KV substation.
- To learn about the equipment used in power transmission and distribution.
- To observe the safety measures and protocols followed in a substation.
- To gain insights into the maintenance and operational procedures.

Visit Details

The visit commenced with a briefing by the substation's chief engineer, who provided an overview of the substation's role in the power grid. The students were then taken on a guided tour of the facility, where they observed the following key components:

1. **Transformers:** The substation houses several transformers that step down the voltage from 230KV/110KV.
2. **Circuit Breakers:** Various types of circuit breakers were demonstrated, highlighting their importance in protecting the electrical network.
3. **Control Room:** The control room, equipped with SCADA systems, was shown to the students, explaining how it monitors and controls the substation's operations.
4. **Switchyard:** The switchyard, with its array of switches and busbars, was explained in detail, emphasizing its role in routing power.

Observations

- The substation follows stringent safety protocols to ensure the safety of personnel and equipment.
- Regular maintenance schedules are adhered to, ensuring the reliability of the power supply.
- The use of advanced technology, such as SCADA, enhances the efficiency and monitoring capabilities of the substation.

Conclusion

The industrial visit to the 230KV/110KV Gurubarapalli Substation was an enriching experience for the III Year EEE students. It provided them with valuable insights into the practical aspects of power transmission and distribution, complementing their academic learning.

Acknowledgements

We extend our sincere gratitude to the management of Er. Perumal Manimekalai Engineering College, Hosur – 635117 for organizing this visit. We also thank the staff of the Gurubarapalli Substation for their hospitality and for sharing their knowledge with us.